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Kusk, T. K.; Kobberoe, M.; Goecke, Nicole Bakkegård; Hjulsgager, Charlotte Kristiane; Kristensen, C. S.; Pedersen, K. S.; Larsen, Lars Erik

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HERD HEALTH MANAGEMENT & ECONOMY

HHM-028

HEALTH MONITORING IN NURSERY AND FINISHER PIGS BY EXTENDING DIAGNOSTIC SCREENING

T.K. Kusk¹, M. Koberoe¹, N.B. Goecke¹, C.K. Hjulsgaard¹, C.S. Kristensen², K.S. Pedersen³, L.E. Larsen¹.

¹National Veterinary Institute, Technical University of Denmark, Kgs. Lyngby, Denmark; ²SEGES Pig Research Centre, Danish Agriculture & Food Council, Skejby, Denmark; ³University of Copenhagen, Faculty of Health and Medical Sciences, Department of Large Animal Sciences, Copenhagen, Denmark.

Introduction

Infectious diseases are of great economic importance in swine production, causing both clinical and subclinical disease influencing welfare, productivity and antibiotic use. The course of diseases is often multifactorial and laboratory diagnostics are not routinely performed. The aim of the study was to evaluate the benefit of monthly health monitoring in nursery and finisher pigs using fecal sock samples and oral fluid samples on a high-throughput qPCR platform, able to detect up to 48 pathogens, combined with serology.

Materials and methods

Three monthly sampling rounds were conducted in 6 nursery and 4 finisher herds. Three different age groups in each herd were sampled. Clinical signs were assessed and fecal sock samples, oral fluid and blood samples were collected from two randomly selected pens in each age group. Sock samples and oral fluid samples were analyzed for 20 different pathogens, using the high-throughput qPCR platform BioMark (Fluidigm). Oral fluid and blood samples were additionally analyzed for antibodies against selected pathogens.

Results

The results from the first round matched the current SPF health status on the farms. Swine influenza virus and porcine circovirus type 2 were detected in all herds, but in different age groups. Results from second and third round are yet to be analyzed and will be presented.

Discussion

By implementing a high-throughput qPCR platform it is possible to lower the diagnostic costs making repeated diagnostic sampling affordable. The diagnostic tool can be used to continually monitor pathogens and dynamics of disease in pig herds. Combined with data on production, health status, clinical signs, antibiotic consumption etc. the detailed knowledge on the presence and dynamics of pathogens in the different sections provide a new, innovative and objective basis for intervention, such as adjustments of vaccination programs, antibiotic treatment protocols etc.